

IRRIGATED CROP-SHARE LEASING
ARRANGEMENTS IN KANSAS

JEN SCHLEGEL

AND

LEAH J. TSOODLE

October 2008
Staff Paper No. 09-02

Jen Schlegel is an Extension Assistant and Leah Tsoodle is an Extension Associate in the Department of Agricultural Economics, Kansas State University (KSU), Manhattan, Kansas 66506. The authors gratefully acknowledge the valuable contributions of Dr. Kevin Dhuyvetter, Professor at KSU.

Irrigated Crop-share Leasing Arrangements in Kansas

Jen Schlegel and Leah J. Tsoodle

Sources of Crop-Share Lease Information

Kansas Agricultural Statistics (KAS) conducts one survey each year in conjunction with the Land Use Value Project in the Department of Agricultural Economics at Kansas State University (KSU). There are four surveys rotated by KAS in conjunction with KSU: irrigated leases, non-irrigated leases, pasture leases, and input costs. During 2008, the Irrigated Farm Lease Arrangement Survey was conducted to gather data on the 2007 crop year. The following represents a summary of the survey results. This information should be useful to Extension personnel, consultants, lenders, producers, and landowners to better understand the various crop-share leasing arrangements that exist for irrigated land in Kansas. The last survey of irrigated crop-share leasing arrangements, compiled in 2004, was also conducted by KAS and KSU. Similar to the 2008 survey, the 2004 survey requested information on the prior year's lease arrangements (2003). The format and survey population for the two surveys are similar, so direct comparison between the results is appropriate.

KAS divides Kansas into nine crop reporting districts. The KAS surveys conducted for the Land Use Value Project are focused toward landlords. This is done because the purpose of the Land Use Value Project is to calculate landlord net income for different soil types in the KAS crop reporting districts for the Kansas Department of Revenue. Additional information pertaining to the survey is available from Leah Tsoodle (ltsoodle@ksu.edu.) in the Department of Agricultural Economics at Kansas State University.

KAS follows the same sampling procedure for all surveys conducted for KSU. KAS draws a sample from their database, which contains landowners, producers, and owner/operators. The sample size is large enough to ensure that a statistically significant number of responses are received from each district. In the 2008 survey, KAS received 581 survey responses from 3,116 mailed for an 18.6% statewide response rate. In 2004, KAS received 643 responses from 3181 mailed for a statewide response rate of 20.2%. Because irrigated crop production in Kansas is largely confined to the western two-thirds of the state, six regions established by the Division of Property Valuation (PVD) are used in the irrigated cropland analysis. The six districts, which roughly correspond to the KAS crop reporting districts, are: Northwest-10, West Central-20, Southwest-30, North Central-40, Central-50, and South Central-60. Figure 1 displays the area covered by each district. District response rates ranged from 13.5% in West Central-20 to 21.7% in South Central-60. Table 1 shows individual district response rates.

General Statewide Lease Information

The KSU/KAS 2008 Irrigated Crop Lease Survey provides information about the distribution and characteristics of irrigated crop lease arrangements in Kansas. In 2008, about 54% of respondents indicated they lease farmland, compared to 53% in 2004. Table 2 contains information on the distribution of the different types of leases. The *Crop-Share* rental agreement was the primary method of leasing cropland in Kansas. Approximately 70% of the respondents utilized *Crop-Share* leases, while less than 27% used *Fixed Cash* leases. In 2004, the respective

percentages were 67% and 29%. Other types of leases (e.g., *Crop and Cash*, *Flexible Cash*, *Net Share*, and *Other*) were used by slightly over 3% and 4% of the respondents in 2008 and 2004, respectively.

The percent of respondents using crop-share leases ranged from 74.2% in West Central Kansas to 52.3% in Northwest Kansas. In the *Crop-Share* type of lease, the landlord receives a percentage of the crop as the rental payment. The most common crop-share split on irrigated crop land in Kansas is one-third to the landlord and two-thirds to the tenant. The *Fixed Cash* lease entails a fixed cash rental payment to the landlord each year. The *Crop & Cash* type is a combination of the fixed cash and crop-share types. *Flexible Cash* leases vary the cash rent each year according to the tenant's crop income. With *Net Share* type lease arrangements, the landlord receives a set percentage of each year's crop, but pays no crop expenses. The percentage is typically smaller than a crop-share lease percentage because the landlord does not pay any production expenses. Although the landlord crop-share percentage is stable across years with this type of arrangement, the actual rental income will change as crop yield and prices vary. *Other* lease types are any lease arrangements that do not fall into the above categories. Since 2004, we have seen a slight increase in the percentage of the *Respondents Leasing*, a decrease in the use of *Fixed Cash* leases and an increase in the use of *Crop-Share* leases. None of the changes in these mean percentages, from 2004 to 2008, are statistically different from zero at the 95% level. Small changes occurred in the other lease categories but they were not statistically significant either. In *Fixed Cash* lease arrangements, landowners are capable of shifting production risk to producers, and tenants must be able to pay cash rents to compete for land.

Table 3 displays general characteristics of the survey respondents, their leases, and irrigation well characteristics. Results show that producers averaged 2.0 landlords per respondent in 2008, up from 1.8 landlords per respondents in 2004. Leases averaged 162.1 acres and have been continuously rented for approximately 17 years. Nearly 43% of the tenants were related to the landlord and over 60% of the leases across the state were written. The average well depth was 174 feet, ranging from 81.2 feet to 358.6 feet. Well output averaged 644.5 gallons per minute, ranging from 418.0 gpm to 784.4 gpm. All category averages have increased since 2004, except the average well depth which remained the same. Due to the variability in responses, with the exception of *Years Land Rented* and *Landlords per Respondent*, the mean changes are not statistically different from zero at the 95% level.

Average landlord ownership shares of major irrigation equipment expenses in each district are shown in Table 4. Percentages varied widely across the state, across equipment, and across both flood and sprinkler irrigation system types. As would be expected, landlord percentage ownership was highest in the well and the pump/gearhead categories.

Regional Information

The 2008 survey for the 2007 crop year asked each respondent for information on a maximum of four crop-share leases. If the respondents had more than four leases, they were asked to respond regarding their most typical leases. Also, if the respondent had leases for more than one crop on the same acreage, they were asked to respond for each crop separately. The "Regional Information" section discusses tables containing response information specific to each KAS district. These tables show the percent of leases in different crop-share divisions and the

percent of leases where landowners and tenants share expenses at the same rate as the crop for each of the major crops.

Northwest Kansas

Over 41% of the crop-share leases in northwest Kansas were a one-third/two-thirds (33/67) landlord/tenant split (table 5). The 25/75 and 50/50 crop-share arrangements were used by 29.3% and 10.1% of respondents, respectively. In 2004, the 33/67 split was the predominant split at 31.4%. The majority of respondents produced corn in 2008; soybeans and multiple crops were next in production in the Northwest region (table 6). The 33/67 arrangement was the typical lease arrangement in corn, soybeans, and multiple crops. In the 33/67 arrangement, 100% of the landlords paid 33% of the corn fertilizer expenses. This compares to only a third of the landlords sharing fertilizer expense in the 2004 survey. In 2008, 100% of the landlords paid 33% of the soybean fertilizer expenses, the same as 2004. However, fertilizer cost on soybean is relatively small and in some instances may even be zero. In 2008, 100% of the landlords paid for 33% of the multiple crop fertilizer expenses. Since multiple crops was a new category for 2008 there are no data for comparison from 2004. When landlords received 25%, 40%, or 50% of the crop it was common for them to share fertilizer, herbicide, and insecticide expenses in this same percentage (i.e., 25%, 40%, or 50%). Responses to other crops have been included in table 6, but are not discussed.

West Central Kansas

In this region within crop-share leases, a 33/67 landlord/tenant arrangement remained predominant at 70.0% (table 5). In 2004, the 33/67 lease arrangement was also the most common arrangement with 51.1% of respondents using this split. The 25/75 crop-share arrangement comprised 27.1% of the total district leases in 2008. The majority of respondents produced corn; multiple crops was the second most reported crop (table 7). In the 33% crop share arrangement, 100% of the landlords paid the same share of fertilizer costs as the crop share they received. Approximately 97% of the landlords paid for 33% of the herbicide and insecticide expenses when receiving 33% of the crop. In 2004, approximately 57% of landlords in a 33% crop-share lease arrangement paid the same share of fertilizer, insecticide, and herbicide expenses.

Southwest Kansas

In southwest Kansas, the predominant crop-share arrangement was a 33/67 split. This arrangement was used by 68.4% of the respondents (table 5). The 25/75 crop-share arrangement was 10.2% of the district total. In the 2004 survey these rates were 64.4% and 13.4%, respectively. The majority of respondents produced corn in 2004 and 2008; with multiple crops as the second most reported crop in 2008 (table 8). The 33/67 crop-share lease was predominant for all crops with the exception of sunflowers where responses were only received in the 50/50 lease arrangement category. In the 33% crop share arrangement 99.6% of landlords paid the same share of fertilizer, herbicide, and insecticide costs. In 2004, regardless of crop type or share received, approximately 78% of landlords shared in costs. In general, inputs are shared in the same percentage as the crop for most crops and crop-share arrangements. This tends to indicate that lease terms (i.e., crop-share percentages) probably vary due to differences in some other factor, such as irrigation equipment ownership.

North Central Kansas

Of the crop-share leases in the North Central region, 61.5% of the respondents used a 40/60 landlord/tenant split (table 5), which was the predominant split (40%) in 2004 also. The 50/50 and 33/67 crop-share arrangements comprised 26.5% and 6.0%, respectively, of the district total. The corresponding percentages for those arrangements in 2004 were 33.3% and 16.7%, respectively. As in 2004 most respondents produced corn or soybeans (table 9). The 40/60 crop-share was the most commonly used arrangement, followed by the 50/50 arrangement, also similar to 2004. In both the 40% and 50% crop-share arrangements landlords shared fertilizer, insecticide, and herbicide expenses in the same percentage as the crop-share 100% of the time. An exception to this pattern was noted with all leases that fell into the 'other' percentage of crop share arrangements. Only 40% of these landlords shared in expenses at the same rate as crop received.

Central Kansas

In this region within the crop-share arrangements, a 33/67 landlord/tenant crop-share was predominant with 38.9% of the leases (table 5). The 50/50 and 40/60 crop-share arrangements were also common in 2008, comprising 20.8% and 27.3%, respectively. In 2004, the 50/50 split occurred 28.6% of the time, whereas the 33/67 and 40/60 crop-share arrangements comprised 25.7% each of the district total. The majority of respondents produced soybeans or corn (table 10), identical to 2004. The 33/67 crop-share was the most common arrangement for soybeans while the 50/50 arrangement was the most common for corn. Regardless of lease arrangement or crop type, 100% of landlords shared in fertilizer, herbicide, and insecticide costs in the same percent share as the crop.

South Central Kansas

The 33/67 and 50/50 landlord/tenant split arrangements were used by 54.0% and 21.0% of the respondents, respectively (table 5). Those percentages were 43.4% and 26.3% in the 2004 survey. In 2008 most respondents produced corn; multiple crops was the second most reported crop (table 11). The predominant arrangement for all crops in 2008 and 2004 was 33/67. Across all crops, in the 33/67 crop-share arrangement, 100% of landlords shared in fertilizer, herbicide and insecticide costs at an equal percentage as the share of the crop they received in 2008.

District Summary

The crop-share lease rental arrangement was dominant in all districts with the fixed cash arrangement following. Roughly 27% of the respondents use a fixed cash arrangement (table 2), a decrease of 2% from 2004. The 33/67 landlord tenant crop-share arrangement was the most commonly reported in the northwest, west central, southwest, central and south central districts in Kansas. In the north central district, the 40/60 landlord tenant crop-share arrangement dominated. Landlord participation in expenses varied across the state, with fertilizer, herbicide, and insecticide expenses typically being shared in the same proportion as the crop.

Conclusion

Results of the 2008 *Irrigated Farm Lease Arrangement Survey* indicate that crop-share rental arrangements remain the most popular type of lease in Kansas, however, these results, along with extension specialists, suggest that other lease types, especially cash leases, are increasing in popularity. The growing use of cash rental arrangements tends to increase the rate

of tenant turnover. In a comparison of the 2008 and 2004 survey results there is evidence of a negative correlation between the use of cash leases and number of years a tenant has rented land.

Changes in crop-share division are also occurring. In 2004, Central-50 primarily used a 50/50 crop-share division; now, survey results indicate the 33/67 split is predominant. Lease arrangements for irrigated land are much more variable than those for nonirrigated land. The 33/67 split on nonirrigated land is overwhelmingly dominant across the state, except in northeast Kansas. However, there are much closer percentages in the different splits for irrigated land (Schlegel and Tsoodle, 2008). The different lease terms are probably due in large part to differences in the ownership of irrigation equipment. Additionally, extension specialists confirm that higher landlord crop-shares are more popular in the eastern portion of the state. As landlords negotiate rental arrangements, their perceptions of income risk and expectations for crop income play a key role (Albright, O'Brien, and Sartwelle, 1996).

Since 2004, a few major factors likely impacting crop land lease arrangements are rising fuel prices and increased ethanol production. Higher fuel prices contribute to increased costs in many areas such as transportation, both of final products and inputs, and pumping costs, just to name a few. The change in ethanol production has impacted commodity prices and competition for land.

The 2007 Farm Bill could potentially impact future crop land lease arrangements once it is implemented. However since the Bill's final form was still being decided at the time this survey was conducted this Bill likely had no impact on this survey. Once implemented the proposed reductions in payment limits could provide incentives to move from cash leases to share crop arrangements in the years to come, assuming payment limits are more binding on producers than landlords.

Since the 2004 survey, based on planted acreage, the crop mix has changed. In general, producers are planting more corn, soybeans, and multiple rotating crops in all areas of the state. While this is interesting to note, it is probably a reflection of normal crop fluctuations, the impact of ethanol and other alternative fuels on crop choice, and the inclusion of a new crop category, "multiple crops." Weather conditions in western Kansas, relative price changes between crops since 2004, and crop rotation patterns all impact producer crop choices.

The land rental market in Kansas is quite dynamic. Changes in farm policy, commodity prices and technology will obviously affect farm structure, rental arrangements, and crop diversity. It is difficult to determine exactly what forces have been driving current rental changes. Some possible influences have been discussed. However, one of the most powerful influences, the effect of the traditional arrangements present in a region, has not been considered. Albright previously suggested that traditional arrangements, which have been in place for lengthy time periods, might not be affected by changes in markets, legislation, or farming practices. However, anecdotal evidence suggests that what has traditionally been done is rapidly changing.

Related K-State Research and Extension publications:

- Albright, Martin, Daniel O'Brien, and James Sartwelle. "Crop Lease Arrangement Market Issues and Trends." Kansas State University, Department of Agricultural Economics, Manhattan, Kansas, 1996.
- Bigge, Holly M., Leah J. Tsoodle, and Christine A. Wilson. "Irrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-04, Manhattan, Kansas, 2002.
- Bigge, Holly M., Leah J. Tsoodle, and Christine A. Wilson. "Irrigated Equipment Cost Survey." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-03, Manhattan, Kansas, 2002.
- Garrett, R.B., Leah J. Tsoodle, and B.B. Golden. "Crop-Share Leasing Arrangements for Irrigated Land in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 05-01, Manhattan, Kansas, 2004.
- Golden, Bill B., Leah J. Tsoodle, and Holly M. Bigge. "Nonirrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 04-03, Manhattan, Kansas, 2003.
- Golden, Bill B., Leah J. Tsoodle, and Holly M. Bigge. "Pasture Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 04-01, Manhattan, Kansas, 2003.
- Langemeier, Larry N. "Irrigated Crop-Share and Cash Rental Arrangements for Your Farm." North Central Regional Publication #146 (NCR 146), revised 1997.
- Langemeier, Larry N. "Fixed and Flexible Cash Rental Arrangements for Your Farm." North Central Regional Publication #75 (NCR 75), revised 1997.
- Langemeier, Larry N. "Pasture Rental Arrangements for Your Farm." North Central Regional Publication #149 (NCR 149), revised 1997.
- Langemeier, Larry N. "Trends in Irrigated Crop Lease Arrangements on Kansas Farms." Report of Progress 811 (SRP 811), 1998.
- Langemeier, Larry N., Martin L. Albright, and Fredrick D. Delano. "Crop-share Lease Arrangements on Kansas Farm Management Association Farms." Report of Progress 757 (SRP 757), 1996.
- O'Brien, Daniel. "Crop-share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics, Manhattan, Kansas, 1998.

Schlegel, Jen and Tsoodle, Leah J. "Nonirrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 08-03, Manhattan, Kansas, 2008.

Schlegel, Jen and Leah J. Tsoodle. "Pasture Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 08-01, Manhattan, Kansas, 2007.

Tsoodle, Leah J. and Holly M. Bigge. "Custom Application Cost Survey in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-06, Manhattan, Kansas, 2002.

Tsoodle, Leah J. and Christine A. Wilson. "Nonirrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 01-02, Manhattan, Kansas, 2000.

Figure 1. Irrigated Land Use Districts

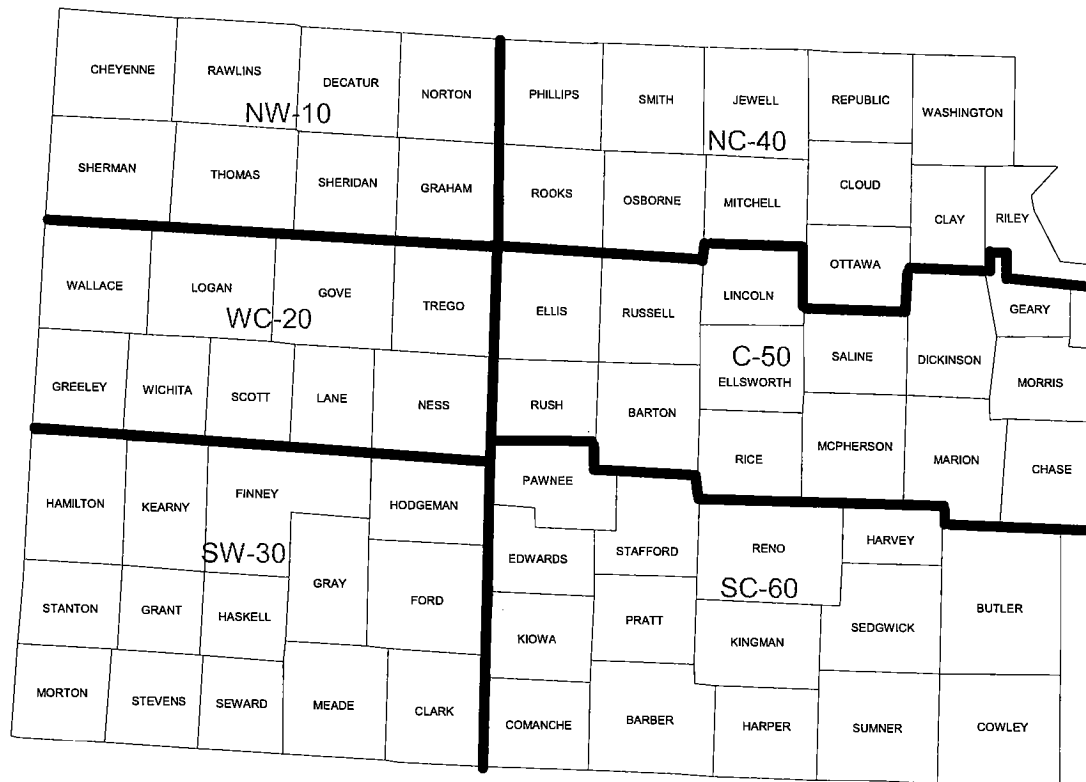


Table 1. Irrigated Crop-Lease Survey

District	Surveys Sent	Leasing Respondents	Response Rate *
Northwest-10	492	84	17.1%
West Central-20	340	46	13.5%
Southwest-30	956	189	19.8%
North Central-40	338	65	19.2%
Central-50	314	50	15.9%
South Central-60	676	147	21.7%
State	3116	581	18.6%

* The response rate is a reflection of the respondents who are leasing divided by the total number of surveys sent. People that responded but do not lease land are not included in the numerator.

Table 2. Irrigated Lease Types

District	Fixed		Crop Share	Crop Share & Fixed Cash		Flexible		Net	
	Cash			Fixed Cash		Cash		Share	Other
Northwest-10	41.9%		52.3%	1.3%		1.3%		3.2%	0.0%
West Central-20	19.3%		74.2%	6.5%		0.0%		0.0%	0.0%
Southwest-30	17.4%		80.4%	0.5%		0.2%		0.2%	1.3%
North Central-40	34.2%		65.8%	0.0%		0.0%		0.0%	0.0%
Central-50	27.7%		72.3%	0.0%		0.0%		0.0%	0.0%
South Central-60	31.5%		64.3%	1.3%		2.3%		0.0%	0.6%
State	26.6%		70.3%	1.1%		0.8%		0.5%	0.7%

Table 3. General Information

District	Ave. Landlords Per Respondent	Ave. Acres Per Lease	Ave. # Years Rented Land	% Related To Landlord	% With A Written Lease	Average Well Depth	Ave. Output (Gallons/Min.)
Northwest-10	1.8	140.1	13.3	54.1%	52.1%	232.4	505.0
West Central-20	2.0	183.3	18.6	42.7%	61.8%	188.4	418.0
Southwest-30	2.4	246.4	16.5	34.4%	54.2%	358.6	699.5
North Central-40	1.8	115.3	20.8	39.8%	71.3%	81.2	729.2
Central-50	1.9	136.8	15.7	40.0%	57.5%	88.8	730.8
South Central-60	2.1	150.5	16.7	46.1%	64.0%	94.5	784.4
State	2.0	162.1	16.9	42.9%	60.2%	174.0	644.5

Table 4. Average Landlord Ownership Share of Irrigated Equipment

	NW-10		WC-20		SW-30		NC-40		C-50		SC-60	
	Flood	Sprinkler	Flood	Sprinkler	Flood	Sprinkler	Flood	Sprinkler	Flood	Sprinkler	Flood	Sprinkler
Well	96.2%	97.5%	100.0%	98.1%	100.0%	99.4%	92.9%	98.1%	90.0%	97.9%	100.0%	99.2%
Pump and Gearhead	100.0%	97.9%	100.0%	98.9%	100.0%	98.2%	88.7%	94.9%	97.6%	95.8%	100.0%	98.3%
Power Unit/Engine	90.0%	95.2%	100.0%	90.9%	100.0%	97.0%	89.5%	91.3%	100.0%	95.7%	100.0%	96.1%
Underground	93.8%		100.0%		100.0%		92.9%		95.0%		100.0%	
Pipe (1,320 ft)												
Conventional Furrow	93.8%		83.3%		100.0%		85.4%		75.6%		90.0%	
Flood System (2,640 ft)												
Tailwater Reuse System	No Responses		100.0%		63.3%		72.5%		33.0%		100.0%	
Land Leveling (\$/acre)	100.0%		100.0%		79.1%		89.0%		70.2%		100.0%	
Sprinkler System		96.8%		96.4%		92.7%		86.9%		94.6%		95.7%
UG Pipe & Wiring (1,320 ft)		97.5%		100.0%		98.6%		95.8%		90.5%		98.7%

Table 5. Percent of Respondents Using Specific Landlord Crop-Share Arrangements by District

Landlord Share	Northwest-10	West Central-20	Southwest-30	North Central-40	Central-50	South Central-60
20.0%	7.1%	0.0%	4.1%	2.4%	0.0%	2.1%
25.0%	29.3%	27.1%	10.2%	0.0%	0.0%	2.6%
30.0%	0.0%	0.0%	3.8%	0.0%	3.9%	3.1%
33.3%	41.4%	70.0%	68.4%	6.0%	38.9%	54.0%
40.0%	4.0%	0.0%	4.4%	61.5%	27.3%	12.0%
50.0%	10.1%	2.9%	5.8%	26.5%	20.8%	21.0%
Other	8.1%	0.0%	3.3%	3.6%	9.1%	5.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6. Northwest-10 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (4 Leases)					
% of Total Leases in Lease Arrangement	25.0%	75.0%			
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	No	No
% of Leases Sharing Herbicide Costs	100.0%	100.0%	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs	100.0%	100.0%			
% of Leases Sharing Energy Costs	No Response	No Response			
Corn (36 Leases)					
% of Total Leases in Lease Arrangement	16.7%	61.0%	5.6%	5.6%	11.1%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	No Response	100.0%	100.0%	100.0%	No Response
Sorghum (2 Leases)					
% of Total Leases in Lease Arrangement		50.0%		50.0%	
% of Leases Sharing Fertilizer Costs	No	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	Responses	No Response	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs		No Response		100.0%	
% of Leases Sharing Energy Costs		100.0%		100.0%	
Soybeans (8 Leases)					
% of Total Leases in Lease Arrangement	12.5%	75.0%		12.5%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	No Response	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs	No Response	100.0%		No Response	
% of Leases Sharing Energy Costs	100.0%	100.0%		100.0%	
Sunflowers (1 Lease)					
% of Total Leases in Lease Arrangement	100.0%				
% of Leases Sharing Fertilizer Costs	100.0%	No	No	No	No
% of Leases Sharing Herbicide Costs	No Response	Responses	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs	No Response				
% of Leases Sharing Energy Costs	No Response				
Alfalfa (7 Leases)					
% of Total Leases in Lease Arrangement	28.6%	14.3%		57.1%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	75.0%	No
% of Leases Sharing Herbicide Costs	No Response	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs	No Response	100.0%		100.0%	
% of Leases Sharing Energy Costs	No Response	100.0%		No Response	
Multiple Crops (8 Leases)					
% of Total Leases in Lease Arrangement	25.0%	25.0%	25.0%	25.0%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	No
% of Leases Sharing Herbicide Costs	No Response	100.0%	100.0%	100.0%	Responses
% of Leases Sharing Insecticide Costs	No Response	100.0%	No Response	100.0%	
% of Leases Sharing Energy Costs	No Response	No Response	100.0%	100.0%	

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Table 7. West Central-20 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (8 Leases)					
% of Total Leases in Lease Arrangement	12.5%	87.5%			
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	No	No
% of Leases Sharing Herbicide Costs	No Response	100.0%	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs	No Response	100.0%			
% of Leases Sharing Energy Costs	No Response	No Response			
Corn (31 Leases)					
% of Total Leases in Lease Arrangement	9.7%	87.1%		3.2%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	100.0%	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs	100.0%	100.0%		No Response	
% of Leases Sharing Energy Costs	100.0%	85.7%		100.0%	
Sorghum (3 Leases)					
% of Total Leases in Lease Arrangement		100.0%			
% of Leases Sharing Fertilizer Costs	No	100.0%	No	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%			
% of Leases Sharing Energy Costs		100.0%			
Soybeans (2 Leases)					
% of Total Leases in Lease Arrangement		100.0%			
% of Leases Sharing Fertilizer Costs	No	100.0%	No	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%			
% of Leases Sharing Energy Costs		100.0%			
Multiple Crops (11 Leases)					
% of Total Leases in Lease Arrangement	9.1%	81.8%		9.1%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	No Response	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs	No Response	66.7%		100.0%	
% of Leases Sharing Energy Costs	No Response	100.0%		100.0%	

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Table 8. Southwest-30 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (42 Leases)					
% of Total Leases in Lease Arrangement	4.8%	76.2%	7.1%	2.4%	9.5%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	No Response	100.0%	100.0%	100.0%	100.0%
Corn (172 Leases)					
% of Total Leases in Lease Arrangement	11.0%	69.2%	4.7%	5.2%	9.9%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	88.9%	100.0%
% of Leases Sharing Herbicide Costs	100.0%	100.0%	100.0%	88.9%	100.0%
% of Leases Sharing Insecticide Costs	100.0%	100.0%	100.0%	88.9%	100.0%
% of Leases Sharing Energy Costs	100.0%	97.5%	100.0%	100.0%	100.0%
Sorghum (13 Leases)					
% of Total Leases in Lease Arrangement		53.8%	7.7%	30.8%	7.7%
% of Leases Sharing Fertilizer Costs	No Responses	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	No Response	100.0%	No Response
Soybeans (16 Leases)					
% of Total Leases in Lease Arrangement		87.4%	6.3%		6.3%
% of Leases Sharing Fertilizer Costs	No Responses	100.0%	100.0%	No Responses	100.0%
% of Leases Sharing Herbicide Costs		100.0%	100.0%		100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%		100.0%
% of Leases Sharing Energy Costs		100.0%	No Response		No Response
Sunflowers (1 Lease)					
% of Total Leases in Lease Arrangement				100.0%	
% of Leases Sharing Fertilizer Costs	No Responses	No Responses	No Responses	100.0%	No Responses
% of Leases Sharing Herbicide Costs				100.0%	
% of Leases Sharing Insecticide Costs				100.0%	
% of Leases Sharing Energy Costs				100.0%	
Alfalfa (28 Leases)					
% of Total Leases in Lease Arrangement	17.9%	71.4%		7.1%	3.6%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No Responses	100.0%	100.0%
% of Leases Sharing Herbicide Costs	100.0%	100.0%		100.0%	100.0%
% of Leases Sharing Insecticide Costs	100.0%	100.0%		100.0%	100.0%
% of Leases Sharing Energy Costs	100.0%	100.0%		No Response	100.0%
Multiple Crops (50 Leases)					
% of Total Leases in Lease Arrangement	6.0%	76.0%	8.0%	6.0%	4.0%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	100.0%	97.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	100.0%	97.1%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	No Response	96.6%	100.0%	100.0%	100.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Table 9. North Central-40 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (5 Leases)					
% of Total Leases in Lease Arrangement			100.0%		
% of Leases Sharing Fertilizer Costs	No	No	100.0%	No	No
% of Leases Sharing Herbicide Costs	Responses	Responses	100.0%	Responses	Responses
% of Leases Sharing Insecticide Costs			100.0%		
% of Leases Sharing Energy Costs			100.0%		
Corn (28 Leases)					
% of Total Leases in Lease Arrangement		7.1%	53.6%	35.7%	3.6%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Energy Costs		100.0%	50.0%	100.0%	No Response
Sorghum (4 Leases)					
% of Total Leases in Lease Arrangement		25.0%	75.0%		
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%	100.0%		
% of Leases Sharing Energy Costs		100.0%	66.7%		
Soybeans (27 Leases)					
% of Total Leases in Lease Arrangement		7.4%	63.0%	18.5%	11.1%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	66.7%
% of Leases Sharing Herbicide Costs	Responses	No Response	100.0%	100.0%	66.7%
% of Leases Sharing Insecticide Costs		No Response	100.0%	100.0%	66.7%
% of Leases Sharing Energy Costs		100.0%	80.0%	66.7%	No Response
Alfalfa (1 Lease)					
% of Total Leases in Lease Arrangement				100.0%	
% of Leases Sharing Fertilizer Costs	No	No	No	100.0%	No
% of Leases Sharing Herbicide Costs	Responses	Responses	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs				100.0%	
% of Leases Sharing Energy Costs				100.0%	
Multiple Crops (15 Leases)					
% of Total Leases in Lease Arrangement			66.7%	26.7%	6.6%
% of Leases Sharing Fertilizer Costs	No	No	100.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	Responses	Responses	100.0%	100.0%	No Response
% of Leases Sharing Insecticide Costs			100.0%	100.0%	No Response
% of Leases Sharing Energy Costs			100.0%	100.0%	No Response

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the corn crop paid 33% of fertilizer expenses.

Table 10. Central-50 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (3 Leases)					
% of Total Leases in Lease Arrangement		66.7%		33.3%	
% of Leases Sharing Fertilizer Costs	No	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs		100.0%		No Response	
% of Leases Sharing Energy Costs		No Response		100.0%	
Corn (34 Leases)					
% of Total Leases in Lease Arrangement		23.5%	26.5%	41.2%	8.8%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	100.0%	100.0%
Sorghum (5 Leases)					
% of Total Leases in Lease Arrangement		40.0%	60.0%		
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%	100.0%		
% of Leases Sharing Energy Costs		100.0%	100.0%		
Soybeans (18 Leases)					
% of Total Leases in Lease Arrangement		44.4%	38.9%	5.6%	11.1%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	100.0%	100.0%
Alfalfa (3 Leases)					
% of Total Leases in Lease Arrangement		100.0%			
% of Leases Sharing Fertilizer Costs	No	100.0%	No	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	Responses	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%			
% of Leases Sharing Energy Costs		100.0%			
Multiple Crops (10 Leases)					
% of Total Leases in Lease Arrangement		60.0%	20.0%		20.0%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	No	100.0%
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	Responses	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%		100.0%
% of Leases Sharing Energy Costs		100.0%	No Response		100.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Table 11. South Central-60 Irrigated Crop-Share Arrangements

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (6 Leases)					
% of Total Leases in Lease Arrangement	16.7%	66.6%		16.7%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No	100.0%	No
% of Leases Sharing Herbicide Costs	100.0%	100.0%	Responses	100.0%	Responses
% of Leases Sharing Insecticide Costs	100.0%	100.0%		No Response	
% of Leases Sharing Energy Costs	No Response	100.0%		No Response	
Corn (88 Leases)					
% of Total Leases in Lease Arrangement	1.1%	52.3%	11.4%	23.8%	11.4%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	No Response	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	No Response	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	No Response	100.0%	100.0%	100.0%	100.0%
Sorghum (16 Leases)					
% of Total Leases in Lease Arrangement		81.3%	6.2%	12.5%	
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	100.0%	Responses
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	
% of Leases Sharing Energy Costs		100.0%	No Response	100.0%	
Soybeans (31 Leases)					
% of Total Leases in Lease Arrangement		45.2%	16.1%	29.0%	9.7%
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	80.0%	No Response
Alfalfa (4 Leases)					
% of Total Leases in Lease Arrangement		75.0%	25.0%		
% of Leases Sharing Fertilizer Costs	No	100.0%	100.0%	No	No
% of Leases Sharing Herbicide Costs	Responses	100.0%	100.0%	Responses	Responses
% of Leases Sharing Insecticide Costs		100.0%	100.0%		
% of Leases Sharing Energy Costs		No Response	No Response		
Multiple Crops (34 Leases)					
% of Total Leases in Lease Arrangement	5.9%	52.9%	14.7%	17.7%	8.8%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	66.7%	66.7%
% of Leases Sharing Herbicide Costs	No Response	100.0%	100.0%	80.0%	0.0%
% of Leases Sharing Insecticide Costs	No Response	100.0%	100.0%	80.0%	66.7%
% of Leases Sharing Energy Costs	No Response	100.0%	100.0%	100.0%	100.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.